

PERSEFONI KYRITSI

Department of Electronic Systems
Niels Jernes Vej 12
Aalborg East, DK-9220, Denmark
Date of birth: August 19, 1973

Office: (+45) 99408657
Fax: (+45) 98151583
web: <http://kom.aau.dk/~persa>
e-mail: persa@es.aau.dk

Education

- 11/01** **Stanford University** **Stanford, CA**
Ph.D. in Electrical Engineering.
Advisor: Prof. D.C. Cox.
Dissertation title: Multiple Element Antenna Systems in an Indoor Environment.
- 9/96-12/97** **Stanford University** **Stanford, CA**
MS in Electrical Engineering (GPA: 4.00/4.00).
- 9/91-7/96** **National Technical University of Athens** **Athens, Greece**
Diploma in Electrical and Computer Engineering (GPA: 9.8/10.0, top 5% of a class of 200).
Degree thesis: Development of a Hybrid Method for the Solution of Complex Electromagnetic Problems through the Combination of the Method of Moments and the Finite Difference- Time Domain Method.

Academic Awards and Distinctions

- 1996-1997** Departmental fellowship for the completion of a MS degree.
Department of Electrical Engineering- Stanford University.
- 1996** Nomination for Fulbright scholarship for graduate studies.
- 1991-1996** Academic awards for scholastic achievement, National Scholarship Foundation, Greece.
- 1991-1996** Honorary awards for academic excellence, Technical Chamber of Greece.

Research Experience

- 9/05-now** **Assistant Professor, Aalborg University** **Aalborg, Denmark**
- Developing advanced (linear and non-linear) signal pre-processing techniques for multiple antenna systems.
 - Exploring cooperative communications based on realistic channel characterization.
 - Developing algorithms for physical layer security.
 - Investigating statistical connectivity for sensor networks.
 - Leading the design and implementation of a software defined radio demonstrator.
- 9/03- 8/05** **Visiting Researcher, Dept. of Mathematics, Stanford University** **Stanford, CA**
- Researched time-reversal techniques for temporal and spatial focusing in indoor and outdoor environments.
 - Designed frequency and antenna weighting schemes for temporal and spatial filtering.
- 11/01-8/03** **Assistant Research Professor, Aalborg University** **Aalborg, Denmark**
- Researched deterministic propagation phenomena (wave guiding) and their effect on MIMO system performance.
 - Created generalized scheduling algorithms for spatial user division and cooperative MIMO systems.
 - Quantified the effect of feedback mechanisms and power/ rate allocation schemes for MIMO systems.
 - Analyzed performance of advanced ARQ schemes for 802.11a channels.
 - Contributed to COST273 action. COST (COoperation européenne dans le domaine de la recherche Scientifique et Technique) is an European Forum for cooperative scientific research.
- 1/00-8/00** **Intern, Lucent Technologies** **Crawford Hill, NJ**
- Conducted extensive measurement campaign of a multiple element antenna system in an indoor environment.
 - Analyzed the accuracy requirements for capacity calculation using MIMO measurements.
 - Performed equipment calibration under controlled experimental conditions.

Teaching Experience

As an instructor and a teaching assistant, I developed the course content, held lectures and regular review sessions, designed homework assignments and solutions, held office hours, generated midterm and final examinations, and graded examination papers.

- | | | |
|--------------------|--|-------------------------|
| Spring 2008 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 4th, 6th and 8th semester undergraduate project groups. ▪ Supervision of 10th M.S. thesis groups in the Mobile Communications M.S. programs. ▪ Stochastic Processes (6th semester). ▪ Propagation, Antennas and Diversity (8th semester). ▪ Inverse filtering and deconvolution (8th semester). | |
| Fall 2007 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 5th semester undergraduate project groups. ▪ Numerical Methods in Field Theory and Propagation (9th semester). ▪ Adaptive Antenna Systems (9th semester). ▪ Introduction to Stochastic Processes (7th semester). ▪ Matlab programming (free study activity). | |
| Spring 2007 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 4th, 6th and 8th semester undergraduate project groups. ▪ Supervision of 10th M.S. thesis groups in the Software Defined Radio M.S. programs. ▪ Stochastic Processes (6th semester). ▪ Propagation, Antennas and Diversity (8th semester). | |
| Fall 2006 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 5th and 7th semester undergraduate project groups. ▪ Supervision of 9th semester project groups in the Mobile Communications and the Software Defined Radio M.S. programs. ▪ Numerical Methods in Field Theory and Propagation (9th semester). ▪ Adaptive Antenna Systems (9th semester). ▪ Introduction to Matlab (7th semester). ▪ Adaptive Antennas (PhD course). | |
| Spring 2006 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 4th and 8th semester project groups. ▪ M.S. thesis supervision. | |
| Fall 2005 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 5th and 7th semester project groups. ▪ Numerical Methods in Field Theory and Propagation (9th semester). ▪ Adaptive Antenna Systems (9th semester). | |
| Fall 2004 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Adaptive Antennas (PhD course). | |
| Fall 2003 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Numerical Methods in Field Theory and Propagation (9th semester). ▪ Adaptive Antenna Systems (9th semester). | |
| Spring 2003 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Supervision of 8th semester project groups. ▪ M.S. thesis supervision. | |
| Fall 2002 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Numerical Methods in Field Theory and Propagation (9th semester). ▪ Adaptive Antenna Systems (9th semester). ▪ Adaptive Antennas (PhD course). | |
| Spring 2002 | Lecturer, Aalborg University | Aalborg, Denmark |
| | <ul style="list-style-type: none"> ▪ Propagation, Antennas and Diversity (Industrial Master's Program). ▪ M.S. thesis supervision. | |

Spring 1999	Teaching Assistant, Stanford University	Stanford, CA
	▪ EE276: Introduction to Wireless Personal Communications.	
Winter 1998	Teaching Assistant, Stanford University	Stanford, CA
	▪ EE279: Introduction to Communication Systems.	
Fall 1998	Teaching Assistant, Stanford University	Stanford, CA
	▪ EE344: High Frequency Laboratory.	
Fall 1997	Teaching Assistant, Stanford University	Stanford, CA
	▪ EE344: High Frequency Laboratory.	
Fall 1996	Grader, Stanford University	Stanford, CA
	▪ EE144: Engineering Electromagnetics.	
Spring 1996	National Technical University of Athens	Athens, Greece
	▪ Voluntary supervision of the Digital Circuits Lab.	
Fall 1995	National Technical University of Athens	Athens, Greece
	▪ Voluntary supervision of Analog Systems Lab.	

Relevant Professional Experience

6/99-8/99	Summer Intern, Lucent Technologies	Crawford Hill, NJ
	▪ Developed software for the processing of indoor measurements for multiple-element antenna systems.	
6/98-9/98	Summer Intern, NOKIA Research Center	Helsinki, Finland
	▪ Developed on-chip spiral inductors.	
	▪ Analyzed component performance (power efficiency, resonance behavior and coupling).	
6/97-9/97	Summer Intern, Intel Corporation	Santa Clara, CA
	▪ Analyzed various strip-line configurations with respect to delay, distortion and cross talk.	
	▪ Studied connector sensitivity and power distribution issues.	
7/95-8/95	Summer Intern, Queen's University of Belfast	Belfast, N. Ireland
	▪ Designed amplifier for wireless applications.	
7/94-8/94	Summer Intern, Deutsche Bundespost & Telekom	Frankfurt am Main, Germany
	▪ Performed network monitoring, line maintenance, verification and testing of new fiber/ cable connections in digital signaling and transmission systems, link installation and disconnection.	

Standards Contributions

- Contributed with theoretical analysis and code development to the 802.11n MIMO channel model (model accepted in November 2003).

Professional Memberships and Activities

Member of IEEE, Sigma Xi.

Reviewer for IEEE and IEE conferences and publications.

Member of Technical Program Committee:

Wireless Personal and Mobile Communications Conference '05.

IEEE Vehicular Technology Conference Fall 2007.

IEEE Statistical Signal Processing Symposium 2007.

International Conference on Communications (ICC) 2008.

Personal, Indoor and Mobile Radio Communications (PIMRC) 2008.

URSI General Assembly 2008.

COST 2100 Workshop.

Member of SWE (Society of Women Engineers) and WEE (Women in Electrical Engineering).

Language Skills

Greek (native)

English, French (fluent)

German, Italian and Spanish (proficient)

Danish (basic)

Peer-reviewed Journal Publications

1. X. Zhou, J.M. Llorente, A. Adenet, C. Lemasson, P. Kyritsi, and P. Eggers, "Assessment of MISO Time Reversal for short-range communications in the 5GHz ISM band," in *Springer Wireless Personal Communications*, vol. 43, no 2, Oct. 2007.
2. P. Kyritsi, D.C. Cox, R.A. Valenzuela, and P.W. Wolniansky, "Capacity and Rate Performance of MIMO Systems with Channel State information feedback," in *IEEE Transactions in Wireless Communications*, vol. 5, no 12, pp. 3469-3479, Dec. 2006.
3. H.T. Nguyen, J.B. Andersen, G.F. Pedersen, P. Kyritsi and P. Eggers, "Time Reversal in Wireless Communications a Measurement Based Investigation," in *IEEE Transactions on Wireless Communications*, vol. 5, no 8, pp. 2242-2252, Aug. 2006.
4. H. Yomo, C. H. Nguyen, P. Kyritsi, Tien Duc Nguyen, S.S. Chakraborty, and R. Prasad, "PHY and MAC Performance Evaluation of IEEE 802.11a WLAN over Fading Channels," in *IETE Journal of Research*, vol. 51, no. 1, pp. 83-94, January-February 2005.
5. P. Kyritsi, G. Papanicolaou, P. Eggers, and A. Oprea, "MISO time reversal and delay spread compression for FWA channels at 5GHz," *IEEE Antennas and Wireless Propagation Letters*, vol. 3, no. 6, 2004, pp. 96-99, June 2004.
6. P. Kyritsi, D.C. Cox, R.A. Valenzuela, and P.W. Wolniansky "Effect of channel information feedback on the capacity of MIMO systems," *Belgian Journal of Electronics and Communications*, no. 4, pp.12-24, Dec. 2003.
7. P. Kyritsi, D.C. Cox, R.A. Valenzuela, and P.W. Wolniansky. "Correlation analysis based on MIMO channel measurements in an indoor environment," in *IEEE Journal on Selected Areas in Communications*, vol. 21, no. 5, pp. 713-720, June 2003.
8. P. Kyritsi, and D.C. Cox, "Expression of MIMO capacity in terms of waveguide modes," in *Electronics Letters*, vol.38, no 18, pp. 1057-1058, 29 Aug. 2002.
9. P. Kyritsi, D.C. Cox, R.A. Valenzuela, and P.W. Wolniansky, "Effect of antenna polarization on the capacity of a multiple element system in an indoor environment," in *IEEE Journal on Selected Areas in Communications*, vol. 20, no. 6, pp.1227-1239, Aug. 2002.
10. P. Kyritsi, and D. Chizhik, "Capacity of multiple antenna systems in free space and above perfect ground," in *IEEE Communications Letters*, vol. 6, no. 8, pp. 325-327, Aug. 2002.
11. P. Kyritsi, R.A. Valenzuela, and D.C. Cox, "Channel and capacity estimation errors," in *IEEE Communications Letters*, vol. 6, no. 12, pp. 517-519, Dec. 2002.

To appear

1. A. Kim, P. Kyritsi, P. Blomgren, and G. Papanicolaou, "Low probability of intercept and intersymbol interference in multiple-input/ single-output time reversal communication systems," accepted for publication in the *IEEE Journal of Oceanic Engineering*.

Under review

1. H. El-Sallabi, P. Kyritsi, G. Papanicolaou, and A. Paulraj, "Experimental Investigation of Time Reversal Precoding for Space-Time Focusing in Wireless Communications," submitted to *IEEE Antennas and Wireless Propagation Letters*.
2. X. Zhou, J.H. Winters, P. Eggers, and P. Kyritsi, "Capacity and complexity trade-offs in MIMO analog-digital combining systems," submitted to *IET Electronic Letters*.
3. X. Zhou, J.H. Winters, P. Eggers, and P. Kyritsi, "Analog-digital combining in MIMO systems- with a view to maximizing analog SNR," submitted to *IEEE Communications Letters*.

Book chapters

1. F. Fitzek, P. Kyritsi, M. Katz, "Power Consumption in Cooperative Wireless Networks- the way out of the energy trap!", in *Cooperation in Wireless Networks: Principles and Applications*, Springer 2006.
2. P. Eggers, P.Kyritsi, I.Z. Kovacs, "Cooperative antenna systems- from a practical channel perspective." in *Cooperation in Wireless Networks: Principles and Applications*, Springer 2006.

Book in preparation

1. T. Brown, E. de Carvalho, P. Kyritsi, A beginner's guide to the MIMO radio channel, Wiley 2009.

Conference Publications

1. P. Kyritsi, G. Papanicolaou, "Time-reversal: Spatio-temporal focusing and its dependence on channel correlation," in *Proc. ICSPCS 2007*.

2. H. Thakur, D. Uppudi, P. Kyritsi, and Y. Le Moullec, "Demonstration of Time Reversal Communications," in *Proc. WPMC 2007*.
3. P. Kyritsi, P. Eggers, "Simultaneous characterization of peer-to-peer and cellular channels in indoor environments," in *Proc. EuCAP 2007*.
4. X. Zhou, P.C.F. Eggers, P. Kyritsi, J.B. Andersen, G.F. Pedersen, J.O. Nielsen, "Spatial focusing and interference reduction using MISO time reversal in an indoor application," in *Proc. IEEE/SP 14th Workshop on Statistical Signal Processing*, pp. 307–311.
5. H.T. Nguyen, P. Kyritsi, P.C.F. Eggers, "Time reversal technique for multi-user wireless communication with single tap receiver," in *Proc. 16th IST Mobile and Wireless Communications Summit*, pp. 1-5.
6. F. Della Rosa, G. Simone, P. Laurent, N.H. Mahmood, R. Charafeddine, B. Pietrarca, P. Kyritsi, G.P. Perrucci, N. Marchetti, J. Figueiras, S. Frattasi, "Emerging Directions in Wireless Location: Vista from the COMET Project," in *Proc. 16th IST Mobile and Wireless Communications Summit, 2007*, pp. 1-5.
7. X. Zhou, P. Kyritsi, P. Eggers, F. Fitzek, "The medium is the message: Secure communication via waveform coding in MIMO systems," in *Proc. IEEE 65th Vehicular Technology Conference (VTC) 2007*, pp. 491-495.
8. P. Kyritsi, P. Popovski, P. Eggers, Y. Wang, D. Ahmed Khan, A. Bouaziz, B. Pietrarca, G. Sasso, "Cooperative Transmission: A Reality Check Using Experimental Data," in *Proc. IEEE 65th Vehicular Technology Conference (VTC) 2007*, pp. 2281-2285.
9. X. Zhou, P. Eggers, P. Kyritsi, "Non-orthogonal MIMO Transmission with Imperfect Channel Estimation," in *Proc. International Conference on Communication Technology (ICCT) 2006*, pp. 1-4.
10. P. Kyritsi, G. Papanicolaou, "The shower curtain effect in time reversal wireless communications," in *Proc. EuCAP 2006*.
11. P. Kyritsi, P. Eggers, R. Gall, J. Mota Lourenco, "Measurement based investigation of cooperative relaying," *Proc. IEEE 64th Vehicular Technology Conference (VTC) 2006*, pp. 1-5.
12. S.S. Christensen, P. Kyritsi, E. de Carvalho, P. Popovski, and P. Koch, "Performance of Pre-processing Schemes with Imperfect Channel State Information," in *Proc. ICT 2006*.
13. P. Kyritsi, G. Papanicolaou, "One-bit Time Reversal for WLAN Applications", in *Proc. Personal Indoor and Mobile Radio Communications Conference 2005*, vol. 1, pp. 532 - 536.
14. P. Kyritsi, P. Stoica, G. Papanicolaou, P. Eggers, and A. Oprea, "Time reversal and zero-forcing equalization for fixed wireless access channels," in *Proc. Asilomar Conference on Signals, Systems and Computers 2005*, pp. 1297 - 1301 .
15. P. Kyritsi, C. Tsogka, and G. Papanicolaou, "Optimally Designed Time Reversal and Zero Forcing Schemes," in *Proc. WPMC 2005*.
16. P. Kyritsi, P. Stoica, and G. Papanicolaou, "Time reversal and zero-forcing for WLAN applications," in *Proc. WPMC 2005*.
17. P. Kyritsi and G. Papanicolaou, "Time-Reversal: Spatio-Temporal Focusing and Its Dependence on Channel Correlation," in *Proc. IEEE Int'l Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, July 2005.
18. P. Kyritsi, G. Papanicolaou, P. Eggers, and A. Oprea, "Time reversal techniques for wireless communications," in *Proc. IEEE 60th Vehicular Technology Conference*, Sept. 2004.
19. P. Fernandes, P. Kyritsi, L.T. Berger, and J. Mártires, "Effects of multi-user MIMO scheduling freedom on cellular downlink system throughput," in *Proc. IEEE 60th Vehicular Technology Conference*, Sept. 2004.
20. P. Kyritsi, P. Eggers, and A. Oprea, "MISO time reversal and time compression," in *Proc. URSI International Symposium on Electromagnetic Theory*, May 2004.
21. D. Porrat, P. Kyritsi, and D.C. Cox, "MIMO capacity in hallways and adjacent rooms," in *Proc. IEEE Global Telecommunications Conference*, Nov. 2002, vol. 2, pp. 1930-1934 .
22. P. Kyritsi, "MIMO capacity in free space and above perfect ground: theory and experimental results," in *Proc. IEEE International Symposium on Personal Indoor and Mobile Radio Communications*, Sept. 2002, vol. 1, pp. 182-186.
23. P. Kyritsi, N. Kadri, E. Thang, and D.C. Cox, "Signal correlation in a hallway environment using waveguide mode analysis," in *Proc. IEEE 56th Vehicular Technology Conference*, Sept. 2002, vol. 2, pp. 787-791.
24. P. Kyritsi, P.C.F. Eggers, and A. Oprea, "Dual domain coherence measures for FWA channels in the 5-6GHz band," in *Proc. IEEE 56th Vehicular Technology Conference*, Sept. 2002, vol. 1, pp. 111-115.
25. P. Kyritsi, and D.C. Cox, "Effect of element polarization on the capacity of a MIMO system," in *Proc. IEEE Wireless Communications and Networking Conference*, May 2002, vol. 2, pp. 892-896.
26. P. Kyritsi, and D.C. Cox, "Modal analysis of MIMO capacity in a hallway," in *Proc. IEEE Global Telecommunications Conference*, Nov. 2001, vol. 1, pp. 567 -571.
27. P. Kyritsi, and D.C. Cox, "Correlation properties of MIMO radio channels for indoor scenarios," in *Proc. 35th Asilomar Conference on Signals, Systems and Computers*, Nov. 2001, vol. 2, pp. 994-998.

28. P. Kyritsi, and D.C. Cox, "Propagation characteristics of horizontally and vertically polarized electric fields in an indoor environment: simple model and results," in *Proc. IEEE 54th Vehicular Technology Conference*, Oct. 2001, vol. 3, pp. 1422 -1426.
29. P. Kyritsi, R.A. Valenzuela, and D.C. Cox "Effect of the channel estimation on the accuracy of the capacity estimation," in *Proc. IEEE 53rd Vehicular Technology Conference*, May 2001, vol. 1, pp. 293 -297.
30. P. Kyritsi, P. Wolniansky, and R.A. Valenzuela, "Indoor BLAST measurements: Capacity of multi-element antenna systems," in *Proc. Multiaccess, Mobility and Teletraffic for Wireless Communications*, Dec. 2000.

Patents

1. F. Fitzek, P. Kyritsi, F. Albiero, "Power saving in signal processing receivers," Patent No PCT/ep2005/054524.
 2. P. Kyritsi, P.C.F. Eggers, T. Brown, H.T. Nguyen, SAMSUNG, "Method of reducing updating rate of orthogonal channel decomposition information in dynamic situations," SAMSUNG, Korean Intellectual Property Office, 2006.
 3. P. Popovski, P.C.F. Eggers, H. Yomo, F. Fitzek, P. Kyritsi, "A Method for Secure Communications in OFDM Systems with Multiple Antennas", Patent filed 2005, AAU Patent nr.: PA 2005 01287; US60/716,945.
-

Invited talks

1. **Can we use time reversal in wireless communications?** November 12th, 2007
Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland.
2. **Measurement based investigation of cooperative relaying** December 13th, 2006
Nokia, Denmark.
3. **Time reversal: from an inverse problem to a communications problem** October 25th, 2006
Applied Mathematics Seminar, Aalborg, Denmark.
4. **Application of random matrix theory to equalization problems** April 6th, 2006
Applied Mathematics Seminar, Aalborg, Denmark.
5. **Wireless communications: Opportunities for time reversal** March 24th, 2006
Telecommunications Research Center (FTW), Austria.
6. **Comparison of pre-equalization schemes** March 8th, 2006
Department of Mathematics, University of Chicago, Chicago, IL.
7. **Wireless communications: Opportunities for time-reversal** July 13th, 2005
Imperial College, London, UK.
8. **Big wireless and little wireless: opportunities for time reversal** June 30th, 2005
Caltech, Pasadena, CA.
9. **Big wireless and little wireless: opportunities for time reversal** June 10th, 2005
MERL, Boston, MA.
10. **Opportunities for time reversal in wireless communications** May 20th, 2005
Applied Math Seminar, Stanford, CA.
11. **Big wireless and little wireless: opportunities for time reversal** March 28th, 2005
Virginia Tech, Blacksburg, VA.
12. **Big wireless and little wireless: opportunities for time reversal** March 16th, 2005
Department of Mathematics, University of Chicago, Chicago, IL.
13. **Big wireless and little wireless: opportunities for time reversal** March 2nd, 2005
University of Texas at Dallas, Dallas, TX.
14. **Big wireless and little wireless: opportunities for time reversal** February 22nd, 2005
Illinois Institute of Technology, Chicago, IL.
15. **The 802.11n channel model** August 24th, 2004
Marvell, CA.
16. **Opportunities for time reversal applications in communications** December 21st, 2004
Lund University, Sweden.
17. **Time reversal for wireless communications** October 25th, 2004
SprintLabs, CA.
18. **The potential of time reversal in multiple antenna systems** October 22nd, 2004
American Institute of Mathematics.
19. **Big wireless and little wireless: Opportunities for time reversal** July 28th, 2004
AT&T Bell Labs, Florham Park, NJ.
20. **Application of the time reversal technique to wireless communications** April 23rd, 2004
Applied Math Colloquium, University of California at Davis.
21. **Time reversal for wireless communications: an engineer's perspective** April 15th, 2004
Indian Institute of Technology, Madras, India.

- | | |
|--|---------------------------------------|
| 22. Effect of channel state information feedback on the capacity and rate of MIMO systems
Indian Institute of Science, Bangalore, India. | April 13th, 2004 |
| 23. Time reversal for wireless communications
Rutgers University, NJ. | April 7th, 2004 |
| 24. Time reversal for wireless communications
Center for Inverse Problems, Rensselaer Polytechnic Institute. | April 5th, 2004 |
| 25. Effect of channel state information feedback on the capacity and rate of MIMO systems
Center for Digital Signal Processing Research, King's College, London. | October 6th, 2003 |
| 26. K factor estimation in a hallway using waveguide mode analysis
COST 273, Management Committee meeting, Barcelona, Spain. | January 15-17, 2003 |
| 27. Correlation measures for MIMO systems
COST 273, Management Committee meeting, Espoo, Finland. | May 30-31, 2002 |
| 28. Multiple antenna systems in an indoor environment
University of Notre Dame, IN. | November 11th, 2001 |
| 29. Multiple antenna systems in an indoor environment
Wireless Communications Department, Lucent Technologies Bell Labs. | August 7th, 2001 |
| 30. Multiple antenna systems in an indoor environment
AT&T Labs, NJ. | August 7th, 2001 |
| 31. Indoor measurements of a multiple antenna system
Wireless Communications Alliance, Santa Clara, CA. | June 19th, 2001 |
| 32. BLAST capacity in HOH hallway, 12x15 antennas
BLAST Workshop, Murray Hill, NJ. | February 2nd, 2001 |
| 33. Indoor BLAST measurements: Capacity of multiple element antenna systems
Wireless Coffee Hour, Murray Hill, NJ. | August 22nd, 2000 |
| 34. Capacity of multiple element antenna systems in an indoor environment
STAR Lab Affiliates Meeting, Stanford, CA. | November 30th, 2000 |
| 35. Capacity measurements of an indoor wireless system
Wireless Communications Seminar, Stanford, CA. | May 2000 |

References

1. **Prof. Jørgen Bach Andersen** (Head of research group)
Address: Institute of Electronic Systems
Aalborg University
Niels Jernes Vej 12
Aalborg East, DK 9220
Denmark
Phone: ++45 99408641, Fax: ++45 98151583
e-mail: jba@es.aau.dk
2. **Prof. Donald C. Cox** (Thesis advisor)
Address: 350 Serra Mall Street, David Packard #361
Stanford University
Stanford, CA 94305-9515
Phone: (650) 723-5443, Fax: (650) 723-9251
e-mail: dcox@spark.stanford.edu
3. **Dr. Reinaldo A. Valenzuela** (Research supervisor)
Address: Alcatel-Lucent
791 Holmdel- Keyport Rd
Holmdel, NJ 07733
Phone: (732) 888-7031, Fax: (732) 888-7013
e-mail: rav@alcatel-lucent.com
4. **Prof. George Papanicolaou** (Research supervisor)
Address: Department of Mathematics
Stanford University Bldg 380
Stanford, CA 94305-2125
Phone: (650) 723-2081, Fax: (650) 725-4066
e-mail: papanicolaou@stanford.edu
5. **Prof. Arogyaswami Paulraj** (Research supervisor)
Address: 272 David Packard Building
350 Serra Mall
Stanford University
Stanford, CA 94305-9510
Phone: (650) 725-8307, Fax: (650) 723-8473
e-mail: apaulraj@stanford.edu